Chapter 12 FLIGHT SAFETY

A. AUXILIARY AIR OPERATIONS:

1. Safety in Auxiliary air operations requires continuous command emphasis on accident prevention programs. Aircraft performance abilities and human limitations, along with the many variables and hazards inherent in flight operations, tend to complicate the task of managing aviation resources effectively. If hazards are not recognized and eliminated or adequately provided for, accident potential will be high and the operational effectiveness of the air program will be unnecessarily threatened. Chapter 8 of reference (e) discusses the flight safety program in detail.

2. Fitness of Aircrew: Certain adverse physiological or psychological factors can be responsible for causing accidents, both in the air and on the ground. These adverse factors include fatigue; improper diet; poor physical condition; improper or excessive use of tobacco, alcohol or drugs; minor illness; mental or emotional stresses. Although such factors cannot be completely eliminated in Auxiliary aviation personnel it is important that the existence of any of these factors is recognized and that appropriate action is taken to minimize their effects.

3. Factors effecting Fitness of Air Crew Personnel: Training and equipment can only be effective if flying personnel are fit to fly. Inadequate nourishment, lack of sleep, excesses which lower efficiency, inattention to minor illnesses, distraction, and preoccupation are incompatible with flight safety. Abuse of the body in any form should be equated to improper maintenance of an aircraft. A professional approach by Auxiliary pilots to flying requires a through knowledge of one's limitations, idiosyncrasies, and physical and mental condition. Consult reference (f) for additional factors in employing operational risk management techniques.

AUXILIARY AVIATION'S GOAL IS FLIGHT SAFETY

4. Flight Safety Officer: Each District appoints a flight safety officer whose duties include responsibility to detect trends and to analyze aviation problems. This, combined with an aggressive program of making safety information available, can provide our Auxiliary aviation community with up to date information on current practices and procedures. Our Aviation National Staff has a Branch Chief for Aviation Safety who is also charged with providing guidance and safety information. Aviation safety is our first priority, without safety we cannot perform our mission.

5. Rules of Risk Management: Detailed information on operational risk management can be found in other documents such as the AIM. Condensed rules of risk management follow:

a. Integrate into your mission planning

b. Accept no unnecessary risk

c. Make decisions at the appropriate level

d. Accept risks only if benefits outweigh potential cost

6. Potential Hazards

a. Environmental

b. Crew

c. Resource Capabilities

d. Training

e. Mission Complexity

f. Other

7. Human Error: A 1993 study determined that 60-65% of mishaps occurred due to human error. Ninety percent of the human errors were due to:

a. Poor judgement (67%)

b. Inattentiveness (16+%)

c. Ineffective supervision (5+%)

8. Evaluate Risk vs. Gain

a. High Risk

(1) If you do not act, the results will be catastrophic

(2) Possibility of saving life

(3) Probability of alleviating pain or suffering

b. Medium Risk

(1) If you do not act, the results will be significant

(2) Possibility of alleviating pain or suffering

(3) Probability of saving property

c. Low Risk

(1) If you do not act, the outcome will have minimal consequences.

B. UNIFORMS/FLIGHT SUITS

1. Flight Crew safety must always be the first consideration in any Coast Guard ordered flight. With this thought in mind, the NOMEX flight suit and gloves are the uniform of first preference. This uniform provides the greatest degree of protection. It is the only uniform authorized for our active duty aviator counterparts and every effort should be made by Auxiliary flight personnel to acquire this uniform. Passengers may fly in their appropriate duty uniform. Other uniforms are detailed in reference (b).

2. It is strongly recommended that all under garments be 100% cotton. This is due to the tendency of synthetics to melt to the body during a flash fire.

3. The wearing of leather boots (pull-on or lace-up, 8 inch) and cotton socks by the Aircrew is also strongly recommended. Low quarters, tennis shoes, fabric shoes and fabric boots tend to absorb fuel or allow fuel to enter the top of the shoe and in an accident this may leave the aviator wearing fuel soaked foot wear.

C. MEDICATION

1. Pilot performance can be seriously degraded by both prescribed and over-the-counter medications, as well as by the medical condition for which they are taken. Many medications such as tranquilizers, sedatives, strong pain relievers, and cough-suppressant preparations, have primary effects that may impair judgement, memory, alertness, coordination, vision, and the ability to do calculations. Others, such as antihistamines, blood pressure drugs, muscle relaxants, and agents to control diarrhea and motion sickness, have side effects that may impair the same critical functions. Any medication that depresses the nervous system, such as a sedative, tranquilizer or antihistamine, can make a pilot, air crew, or observer much more susceptible to hypoxia. (ref. AIM 8-1-1,c)

2. The FAR's prohibit pilots from performing any duties as pilot or co-pilot while using any medication that affects the faculties in any way contrary to safety. The safest rule is not to fly as a pilot, air crew, or observer while taking any medication, unless approved to do so by the FAA. (ref. AIM 8-1-1,c)

D. ALCOHOL IMPAIRMENT

1. Alcohol is a well recognized central nervous system depressant. It is one of the most frequently used drugs in our society. Even small amounts of alcohol in the blood can impair judgement, reflexes, and muscular control. The level of alcohol in the body varies with the frequency and amount of alcohol intake, the length of

time following cessation of drinking, and an individual's body weight. A zero alcohol level is essential for aviation personnel to meet the rigorous demands of flight operations.

2. Detectable blood alcohol or symptomatic hangovers are causes for grounding of flight crew personnel. Moreover, flight operations (beginning with flight planning) are prohibited within 8 hours of consumption of one drink. One drink is defined as any of the following: 12 oz. of beer, 4 oz. of wine or 1 oz. of spirits and within 12 hours of consumption of three or more drinks. Although some personnel may completely metabolize all alcohol well within the 8 or 12-hour limits, this time span allows an adequate margin of safety before resuming flight operations.

THIS RESTRICTION HOLDS FOR ALL FLIGHT CREW MEMBERS NOT JUST THE PILOT

E. FLIGHT RESTRICTIONS FOLLOWING BLOOD DONATION

1. Aircrew personnel should not fly on ordered flights for 5 days following donation of 500 cc of blood or until cleared by a medical examiner, if the proposed flight is scheduled within the minimum five-day period.

F. DEHYDRATION IN SUMMER MONTHS

1. Very often we are called on to fly long mission at low altitudes, 1000 to 1500 feet AGL, during the summer months. There is the possibility of dehydration occurring during missions of this type. It is imperative that all crew members stay alert for the first signs of dehydration and that they be aware what the signs of dehydration are. The PIC always has the authority to halt a mission when he feels that safety becomes an issue and he should never hesitate to do so.

2. Be sure to carry water along for all crew members during situations of this type. Stops, whenever possible, to allow crew members to re-hydrate, cool-off and rest are also a good idea.

G. NASA AVIATION SAFETY REPORTING SYSTEM

1. Purpose: This cooperative safety-reporting program invites pilots and other users of the National Aviation System to report to the National Aeronautics and Space Administration (NASA) actual or potential discrepancies and deficiencies involving the safety of operations. The effectiveness of this program in improving safety depends on the free, unrestricted flow of information from the users of the

National Aviation System. Based on information from the program, the FAA will take corrective action as necessary to remedy defects or deficiencies in the National Aviation System. The reports may also provide data for improving the current system and planning for the future.

2. NASA responsibilities: The NASA Aviation Safety Reporting System (ASRS) provides for the receipt, analysis, and de-identification of aviation safety reports. In addition, periodic reports of findings obtained through the reporting system are published and distributed to the public, aviation community, and FAA.

3. A NASA ASRS advisory committee conducts periodic meetings to evaluate and ensure the effectiveness of the reporting system.

4. Prohibition against use of reports for enforcement purposes: Section 91.57 of the Federal Aviation Regulations (14CFR 91.57) prohibits the use of any report submitted to NASA under the ASRS (or information derived therefrom) in any disciplinary action, except information concerning criminal offenses or accidents.

5. When a violation of the Federal Aviation Regulations comes to the attention of the FAA from a source other than a field report filed with NASA under ASRS, appropriate action will be taken.

6. The NASA ASRS security system is designed and operated by NASA to ensure the confidentiality and anonymity of the reporter and all other parties in a reported occurrence or incident. The FAA will not seek, and NASA will not release or make available to the FAA, any report filed with NASA under ASRS or any other information that might reveal the identity of any party involved in an occurrence or incident reported under ASRS.

7. Reporting procedures: NASA ARC Form 277, which is preaddressed and postage free, is available at FAA offices. This form or a narrative report should be completed and mailed to: Aviation Safety Reporting System, P. O. Box 189, Moffett Field, CA 94035.

8. Enforcement policy: It is the policy of the Administrator of the FAA to perform his responsibility under the Federal Aviation Act for the enforcement of the Act and the Federal Aviation Regulations in a manner that will best tend to reduce or eliminate the possibility of, or recurrence of, aircraft accidents. The FAA enforcement procedures are set forth in Part 13 of the Federal Aviation Regulations (14CFR Part 13) and FAA enforcement handbooks.

9. In determining the type and extent of enforcement action to be taken in a particular case, the following factors are considered:

   a. Nature of the violation;

b. Whether the violation was inadvertent or deliberate;

c. The certificate holder's level of experience and responsibility;

d. Attitude of the violator;

e. The hazard to safety of others which should have been foreseen;

f. Action taken by employer or other Government authority;

g. Length of time which has elapsed since violation;

h. The certificate holder's use of the certificate;

i. The need for special deterrent action in a particular regulatory area, or segment of the aviation community; and

j. Presence of any factors involving national interest, such as the use of aircraft for criminal purposes.

10. The filing of a report with NASA concerning an incident or occurrence involving a violation of the Act or the Federal Aviation Regulations is considered by the FAA to be indicative of a constructive attitude. Such an attitude will tend to prevent future violations. Accordingly, although a finding of a violation may be made, neither a civil penalty nor certificate suspension will be imposed if:

    a. The violation was inadvertent and not deliberate;

    b. The violation did not involve a criminal offense, or accident, or action under section 609 of the Act which discloses a lack of qualification or competency, which are wholly excluded from this policy;

    c. The person has not been found in any prior FAA enforcement action to have committed a violation of the Federal Aviation Act, or any regulation promulgated under that Act for a period of 5 years prior to the date of the occurrence and;

    d. The person proves that, within 10 days after the violation, he or she completed and delivered or mailed a written report of the incident or occurrence to NASA under ASRS.

11. Availability of forms: copies of the reporting form (NASA ARC Form 277) may be obtained free of charge from FAA offices, including flight service stations or directly from NASA at the ASRS office, P. O. Box 189, Moffett Field, CA 94035.

H. EXEMPTION 5614 FLIGHT BELOW 500 FEET

1. Appendix E of reference (b) illustrates this partial exemption from the Federal Aviation Regulations, specifically, CFR Part 14, FAR 91.119. The Coast Guard renews this exemption with the FAA each two years. In essence, this partial exemption from the regulation is specifically regarding flight below 500' for the "saving of lives". The exemption reads, in part, " the Coast Guard states that its flight crews undergo recurrent specialized training to ensure the crews maintain currency and are qualified to perform low-level missions.

2. One of the perils is that Auxiliarists who cannot document "recurrent specialized training" in the low-level flight regime open themselves to CFR Part 13, FAA Investigative and Enforcement Procedures if something happens and training documentation cannot be proved. As this low-level flight regime is inherently dangerous, it is implicit that Auxiliary pilots should not operate in this flight regime unless qualified and current, then only under orders for an actual SAR mission. To do otherwise is not only dangerous but may expose the Auxiliary pilot to FAA certificate action. Auxiliary pilots therefore are not authorized to penetrate below 500 feet Above Ground Level (AGL) for any purpose unless it is to aid people in distress or to save or protect property.